



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

**REGION 8, MONTANA OFFICE
FEDERAL BUILDING, 10 West 15th Street, Suite 3200
HELENA, MONTANA 59626**

Ref: 8MO

November 20, 2012

Gallatin National Forest
Bozeman Ranger District
Attn: Teri Seth, NEPA Team Leader
3170 Fallon Street, Ste. C
Bozeman, Montana 59718

Re: CEQ # 20120331, Jack Rabbit to Big Sky Meadow Village
161 kV Transmission Line Upgrade DEIS

Dear Ms. Seth:

The Environmental Protection Agency (EPA) Region VIII Montana Office has reviewed the Draft Environmental Impact Statement (DEIS) for the Jack Rabbit to Big Sky Meadow Village 161 kV Transmission Line Upgrade Project, in accordance with EPA's responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA), 42 U.S.C. Section 4321 *et seq.*, and Section 309 of the Clean Air Act, 42 U.S.C., Section 7609. Section 309 of the Clean Air Act directs EPA to review and comment in writing on the environmental impacts of any major Federal agency action. EPA's comments include a rating of both the environmental impact of the proposed action and the adequacy of the NEPA document.

The EPA recognizes the purpose and need for the proposed construction and operation of the upgraded 161 kV Jack Rabbit to Big Sky Meadow Village transmission line to meet increasing load demands and improve electrical system reliability and geographical diversity of the electric service routes to the fast growing Big Sky, Montana area. We agree with the Gallatin National Forest's (GNF's) identification of Alternative 3 as the preferred alternative, since Alternative 3 involves the fewest acres of land disturbance (52.1 acres), fewest river and stream crossings, and fewest crossings of riparian and wetland habitat (2.1 acres of wetland habitat). Alternative 3 would also reduce scenery impacts to wilderness access at the Lava Lake trailhead, and reduce the number of recreational residences near the transmission line (40 residences within 300 feet of the transmission line vs. 57 residences currently).

Although we have some concerns that the preferred transmission line routing would cross the Gallatin River (a wild and scenic river candidate) 6 times, and have 14 other crossings of perennial streams (8 crossings on GNF lands and 6 crossings on private land), and 10 crossings of intermittent streams (7 crossings on GNF lands and 3 crossings on private land). There may be potential to affect surface waters, including some waters listed by the State of Montana as water quality impaired under Section 303(d) of the Clean Water Act (e.g., Hell Roaring Creek, Storm Castle Creek, West Gallatin River, South Fork West Gallatin River are located in the project area).



We are pleased that all waterbodies and associated floodplains and riparian vegetation would be spanned by the proposed transmission line, and that an NPDES (MPDES) permit would be obtained for construction stormwater discharges, which includes development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) prescribing engineering practices and BMPs to minimize sediment production and transport to streams. We also appreciate the identification and discussion of project design features and mitigation and monitoring measures in Chapter 2 of the DEIS, as well as the Appendices regarding Right-of-Way (ROW) Clearing, Weed Management, Reclamation, and Revegetation, and Best Management Practices (BMPs) that provide information on mitigation of potential adverse environmental impacts of the proposed project. In addition we appreciate the GNF's commitment to prepare a Construction, Operation, and Maintenance Plan (COM Plan) to address transmission line mitigation, design requirements and monitoring guidelines for the construction, operation, and maintenance of the line to avoid impacts to the environment, including appointment of an inspector to oversee construction and assure that environmental protection is carried out in accordance with the approved COM Plan.

We do encourage the GNF staff to contact the Montana Dept. of Environmental Quality's (MDEQ's) Total Maximum Daily Load (TMDL) program staff (e.g., Mr. Dean Yashan at 406-444-5317 and/or Mr. Robert Ray at 406-444-5319) to assure that MDEQ considers the proposed project to be consistent with MDEQ's development of TMDLs and Water Quality Restoration Plans for water quality impaired streams in the project area. We also encourage review of the MDEQ's pamphlet, "*Understanding the Montana TMDL Process.*" <http://deq.mt.gov/wqinfo/TMDL/default.mcp> .

In regard to access roads, the DEIS indicates that the proposed project involves construction of 600 feet of new temporary access road on GNF lands. Construction of access roads is an important aspect of transmission line projects, since road construction and road operation and maintenance can result in adverse effects to water quality and other resources. Sediment from roads, particularly during road construction and reconstruction, and from poorly maintained roads with inadequate road drainage, is often a major cause of adverse water quality impacts, particularly where roads are located near streams and there are many stream crossings. It is not clear if the proposed 600 foot access road on GNF lands would cross Logger Creek, which is in the vicinity of the Indian Ridge construction yard that the proposed road is intended to access. We recommend that this be clarified in the FEIS.

It is also not clear to us if the proposed 600 feet of new temporary road on GNF lands is the only access road needed for construction of the overall 37 mile transmission line across all land ownerships. Information should be provided regarding any additional access roads that may be needed for construction, operation and maintenance of the 21 miles of the proposed transmission line across non-federal lands. The DEIS Summary states that the 21 miles of the proposed project and associated substations on non-federal lands "are not part of the DEIS evaluation," since they are outside Forest Service jurisdiction. However, we note that when a proposed transmission line corridor is located on both federal and non-federal lands, federal assessment of cumulative impacts and connected actions under NEPA can require consideration of the transmission line impacts on the portions of the transmission line crossing non-federal lands (40 CFR 1508.25(a)(1)). It is important that the connected action of transmission line construction across non-federal lands be adequately analyzed and environmental effects disclosed in the NEPA analysis.

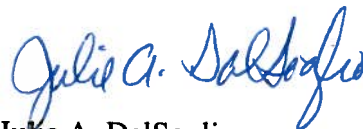
The DEIS does include analysis and disclosure of environmental effects of the entire 37 mile transmission line despite the statement noted above that the 21 miles of the proposed project and associated substations on non-federal lands "are not part of the DEIS evaluation." It is not clear to us, however, if all the potential environmental effects of the entire 37 mile transmission line across all land ownerships have been adequately analyzed and disclosed, particularly indirect and cumulative effects associated with the transmission line crossing of non-federal land. In our more detailed comments (see enclosed) we have referenced an analysis that discusses such considerations. We recommend that attention be directed at assuring that the indirect and cumulative effects of the entire 37 mile transmission line, including the 21 miles across non-federal lands, are adequately evaluated and disclosed in the FEIS. We also recommend that a map showing the entire 37 mile transmission line route be included in the FEIS (i.e., including the transmission line alignment across the 21 miles of non-federal land).

We also recommend that placement of transmission line support structures be prohibited in wetlands, and that a wetland buffer zone be used to avoid inadvertent construction impacts to wetlands (e.g., 50 foot wetland buffer zone). In addition we recommend that wetlands be flagged on the ground to facilitate contractor avoidance of wetlands. We also encourage use of single pole structures on the transmission line rather than H-frame structures wherever possible to reduce soil disturbances, although we recognize that H-frame structures may be needed in certain areas due to terrain, span length and for additional support.

The EPA's further discussion and more detailed questions, comments, and concerns regarding the analysis, documentation, or potential environmental impacts of the Jack Rabbit to Big Sky Meadow Village 161 kV Transmission Line Upgrade DEIS are included in the enclosure with this letter. Based on the procedures EPA uses to evaluate the adequacy of the information and the potential environmental impacts of the proposed action and alternatives in an EIS, the DEIS has been rated as Category EC-2 (Environmental Concerns - Insufficient Information). Our environmental concerns are associated with potential impacts to water quality and wetlands during transmission line construction and operation, and uncertainty regarding overall indirect and cumulative impacts of the entire transmission line across all land ownerships. The EPA believes additional information is needed to fully assess and mitigate all potential impacts of the management actions. A copy of EPA's rating criteria is attached.

The EPA appreciates the opportunity to review and comment on the DEIS. If we may provide further explanation of our comments and concerns please contact Mr. Steve Potts of my staff in Missoula at 406-329-3313 or in Helena at (406) 457-5022, or via e-mail at potts.stephen@epa.gov. Thank you very much for your consideration.

Sincerely,



Julie A. DalSoglio
Director
Montana Office

Enclosures

cc: w/ enclosures

Suzanne Bohan/Judy Roos, 8EPR-N, Denver

Robert Ray/Dean Yashan, MDEQ, Helena

EPA COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE JACK RABBIT TO BIG SKY MEADOW VILLAGE 161 KV TRANSMISSION LINE UPGRADE

Brief Project Overview

The Bozeman Ranger District of the Gallatin National Forest prepared this EIS to evaluate impacts of a proposal by NorthWestern Energy to rebuild an existing 69 kilovolt (kV) electric transmission line to a 161 kV electric transmission line. The upgraded 161 kV transmission line would connect the existing Jack Rabbit Substation located near Four Corners, west of Bozeman, Montana, to a new substation near Big Sky Meadow Village in Big Sky, Montana to upgrade the existing 69 kV line to accommodate current requirements, anticipated future growth, and improve reliability for existing customers. The transmission line length is 37 miles with 16 miles across on National Forest land in the Gallatin Canyon. The US Forest Service developed three action alternatives, and the No Action (Alternative 1) in response to issues raised by the public and agency specialists. The three action alternatives include: Alternative 2 – Proposed Action; Alternative 3 – Agency Preferred Alternative (Cave Creek and Cascade East); and Alternative 4 (Cave Creek and Cascade West).

Alternative 2, the Proposed Action, would amend NorthWestern Energy's existing Special Use Permit (SUP) to authorize construction, operation, and maintenance of a 161 kV electrical transmission and distribution line on 16 miles of National Forest System (NFS) lands in Gallatin Canyon between the Jack Rabbit Substation near Four Corners, west of Bozeman, and the Meadow Village substation at Big Sky, Montana. The new transmission line would be constructed within 10 to 15 feet of the existing transmission line in the existing right-of-way (ROW), but tree and vegetation clearing would be required to increase the transmission line ROW from the current width of approximately 40 feet, to a 50- to 80-foot wide varying distance depending on the type of transmission structure used. From the Jack Rabbit Substation, the proposed route would proceed south through open pasture, rolling slopes, and residential areas (in the extreme north end) before crossing US Hwy 191 and entering the Gallatin River Canyon. The proposed route would then continue south following the existing alignment and US Hwy 191 for approximately 23 miles (16 miles through NFS lands) through the Gallatin River Canyon to the Big Sky turn-off at MT Hwy 64. From the Big Sky turnoff, the proposed route would then turn west, following the existing 69 kV line alignment for approximately 1.4 miles to the new Meadow Village Substation site. Approximately 600 feet of new temporary access road may be built to access Indian Ridge construction yard. Construction would be scheduled to begin in 2013 with the system coming on line, energized at the 161 kV level, during the fall of 2014. The existing transmission line would be removed after the new one is completed and materials disposed of off NFS lands. Construction waste will be disposed of off NFS lands. The 21 miles of the proposed Project and associated substations outside the US Forest Service jurisdiction are subject to Gallatin County permitting requirements (Four Corners Zoning District or Gallatin Canyon/Big Sky Zoning District).

Alternative 3, Cave Creek and Cascade East, the preferred alternative, was developed to respond to concerns about transmission line impacts to the Lava Lake Trailhead, the Lava Lake wilderness access trail, the Gallatin River (which is an eligible wild and scenic river) and impacts to the Cascade Creek and Cave Creek Tracts. The alternative would move the transmission line to the east side of US Hwy 191. Alternative 3 would utilize the same alignment as Alternative 2, with the exception of two local

routing options (LROs) that move the transmission line to the east side of US Hwy 191 and the Gallatin River, across from the Cascade recreation residences. It would eliminate one transmission line and one distribution line crossing each of the Gallatin River and US Hwy 191. Alternative 3 would also require two amendments of the Forest Plan: an amendment one for new ROW in Management Area 25 for electrical transmission lines and pipelines, climatic and snowmeasuring sites, and electric sites; and an site-specific amendment relating to Forest Plan Wild and Scenic Rivers direction allowing new right-of-way in proximity to the Gallatin River

Alternative 4, Cave Creek and Cascade West, was developed to respond to the same issues described in Alternative 3, but provides a different solution in the Cascade Creek Tract vicinity. Alternative 4 would utilize the same route as Alternative 3 with the exception of the Cascade West LRO that would move the transmission line to the west of the recreation residences at the Cascade and Cave Creek Tracts, and would eliminate two Gallatin River crossings and two US Hwy 191 crossings, thereby reducing visual impacts that result from the crossings, and also result in the removal of a highly visible transmission pole in the Lava Lake trailhead parking lot. Alternative 4 would also require two Forest Plan amendments similar to Alternative 3.

Comments:

1. Thank you for including clear narrative descriptions of transmission line alternatives; project design features; mitigation and monitoring; alternatives considered but eliminated; a map identifying transmission line alignment options, topography, watersheds and surface waters to be crossed (Figure 2-1); Figures 2-2 to 2-7 showing transmission line structures, construction yards and decking areas along the alignments; Table 2-1 comparing project features and resource impacts of alternatives; Table 1-2, disclosing "Federal, State, And Local Permits, Approvals, and Authorizing Actions;" and many appendices with additional helpful project information. The narrative discussion, and other information presented in maps, figures, tables, and appendices facilitate improved project understanding, help define issues, and assist in evaluation of alternatives providing a clearer basis of choice among options for the decisionmaker and the public in accordance with the goals of NEPA.

We also appreciate the commitment to prepare a specific Construction, Operation, and Maintenance Plan (COM Plan) to address transmission line mitigation and design requirements and monitoring guidelines for the construction, operation, and maintenance of the line to avoid inadvertent impacts to the environment (page 2-28). We understand this will include a Forest Service appointed inspector to oversee construction activities and determine if environmental protection is being accomplished according to the approved COM Plan.

Alternatives

2. The EPA recognizes the purpose and need for proposed construction and operation of the upgraded 161 kV transmission line to meet increasing load demands and improve electrical system reliability and geographical diversity of the electric service routes in the fast growing Big Sky, Montana area. We agree with the Gallatin National Forest's identification of Alternative 3 as the preferred alternative, since this alternative appears to involve the fewest acres of land disturbance (52.1 acres),

fewest river and stream crossings; and fewest crossings of riparian and wetland habitat (crossing of 2.1 acres of wetland habitat). Alternative 3 would also reduce scenery impacts to wilderness access at the Lava Lake trailhead; and reduce the number of recreational residences near the transmission line (40 residences within 300 feet of the transmission line vs. 57 residences currently). Although we also note that Alternative 3 involves greater timber clearing (22.4 acres) and effects to forest vegetation than Alternative 2 (14.8 acres). However, it appears that such impacts are necessary to move the transmission line away from residences and to reduce river and stream crossings.

3. We appreciate the consideration and discussion of an underground transmission line alternative for reduction of visual impacts in the “Alternatives Considered But Dismissed” section of DEIS Chapter 2 and in Appendix A. We agree that increased land disturbance, construction difficulties and high cost of construction on mountainous terrain, reduced reliability, and other considerations make an underground transmission line impractical.
4. We encourage use of single pole structures on the transmission line rather than H-frame structures wherever possible to reduce soil disturbances. We are pleased that the DEIS states that single wood pole structures are the preferred structure type, although H-frame structures may be used in areas identified during design that will require additional support due to terrain, span length and structure load (page 2-10).

Connected action

5. The proposed overall 37 mile transmission line involves construction across 16 miles of NFS lands and across 21 miles of other land ownerships (page 1-4). The DEIS states that the 21 miles of the proposed project and associated substations on non-federal land “are not part of the DEIS evaluation,” since they are outside the Forest Service jurisdiction (Summary page iv). The DEIS further states that construction of the transmission line across the non-federal land ownerships are subject to Gallatin County permitting requirements (Four Corners Zoning District or Gallatin Canyon/Big Sky Zoning District (page 2-5).

When a portion of a proposed transmission line corridor is located on non-federal lands, federal assessment of cumulative impacts and connected actions under NEPA can require consideration of the transmission line impacts on those non-federal portions (40 CFR 1508.25(a)(1)). This can complicate public land management decisions and addition of needed energy infrastructure. The DEIS appears to include analysis and disclosure of environmental effects of the entire 37 mile transmission line despite the statement in the DEIS summary noted above. Although it is not clear if all the potential environmental effects have been adequately analyzed and disclosed for the entire 37 mile transmission line across all land ownerships. It is important that the connected action of transmission line construction across non-federal lands be adequately analyzed and environmental effects disclosed, particularly indirect and cumulative effects. For your information we found a legal analysis discussing such considerations that we want to bring to your attention, <http://www.bdlaw.com/assets/attachments/Power%20to%20the%20People%20-%20Electric%20Transmission%20Siting%20on%20Public%20Lands%20Schaumberg%20Wagner.pdf>, (“Power To The People: Electric Transmission Siting On Public Lands”).

We recommend that attention be directed at such matters to be sure the connected action of transmission line construction across non-federal lands is adequately analyzed and environmental effects disclosed in the NEPA analysis. We also recommend that a map showing the entire 37 mile transmission line route be included in the DEIS (i.e., including the route across the 21 miles of non-federal land from the Jack Rabbit Substation near Four Corners to the Gallatin National Forest boundary).

Water Resources

6. The DEIS states that approximately 3.4 miles of the proposed transmission line on NFS lands can be accessed from existing roads and trails, and would require no road work, while approximately 1.6 miles of the proposed 161 kV transmission line would require use of existing roads and trails and road improvements (page 2-22). Approximately 600 feet of new temporary access road would be built to access Indian Ridge construction yard, and 10.2 miles of the proposed 161 kV transmission line would have no access due to terrain or other obstacles. Helicopter and/or walk-in access would be needed during construction unless a crane can reach from an existing road. An additional 0.8 mile has an undetermined access prescription due to lack of engineering design information.

It is not clear to us if any additional access roads may need to be constructed for the 21 miles of proposed transmission line across non-federal lands. If any additional access road construction may be needed for the portion of the proposed transmission line to be constructed on non-federal land that information should be included in the FEIS.

7. We are pleased that the proposed project involves construction of only 600 feet of new temporary access road on NFS lands. Construction of access roads is an important aspect of transmission line projects, since road construction and road operation and maintenance can result in adverse effects to water quality and other resources. Sediment from roads, particularly during road construction and reconstruction, and from poorly maintained roads with inadequate road drainage, is often a major cause of adverse water quality impacts, particularly where roads are near streams and there are many stream crossings. It is important to minimize new road construction, as well as to properly plan and design access roads, and properly maintain roads and utilize adequate sediment and erosion control BMPs during road construction to minimize erosion and reduce sediment production and transport from roads (i.e., locate roads away from steep slopes or erosive soils, stabilize cut and fill slopes; provide for adequate road drainage and erosion control measures, etc.).

Logger Creek appears to be in the vicinity of the Indian Ridge construction yard that the proposed 600 foot temporary road is intended to access (Figure 2-7, page 2-25). It is not clear if this proposed temporary access road would cross Logger Creek. We recommend that the location of this access road be more clearly disclosed in the FEIS. If this road would cross any streams, it will be important that adequate attention be paid to minimizing stream impacts during construction and with appropriate road maintenance activities carried out while the road is in use.

8. The DEIS states that construction, operation, and maintenance of the proposed transmission line may cause erosion and increase sediment in storm water runoff to receiving waters causing increased turbidity and channel sedimentation (page 3-149). Impacts to water quality could also result from

accidental spills and leaks of petroleum, oil, and lubricants from equipment and vehicles used during construction of the transmission line. Figure 3.4.4-1 (page 3-143) shows watersheds and Table 3.4.4-2 (page 3-154) provides information on water quality impaired streams in the project area (i.e., Hell Roaring Creek, Storm Castle Creek, West Gallatin River, South Fork West Gallatin River).

A Total Maximum Daily Load (TMDL) and Water Quality Restoration Plan will need to be prepared by the State of Montana to promote water quality restoration of water quality impaired streams listed by the State under Section 303(d) of the Clean Water Act. It will be important that the proposed transmission line project be consistent with the Montana Dept. of Environmental Quality's (MDEQ's) preparation of TMDLs and Water Quality Restoration Plans for impaired waters. We recommend that the Gallatin NF consult with MDEQ TMDL program staff to assure that the MDEQ considers the proposed project consistent with development and implementation of applicable TMDLs and water quality improvement and restoration of support for beneficial uses in 303(d) listed streams (contact MDEQ staff such as Mr. Dean Yashan at 406-444-5317, and/or Mr. Robert Ray at 406-444-5319). We also encourage review of the MDEQ's pamphlet, *"Understanding the Montana TMDL Process."* <http://deq.mt.gov/wqinfo/TMDL/default.mcp> .

9. The DEIS states that 36 waterbodies would be crossed on the proposed project by both NFS and private lands, with 27 waterbody crossings on NFS lands and 9 crossings on private land (page 3-158). This includes 8 crossings of the Gallatin River and 18 crossings of perennial tributary streams for a total of 26 perennial stream crossings (6 perennial streams are located on private lands), and 10 crossings of intermittent streams (7 on NFS lands and 3 on private lands). The preferred alternative would cross the Gallatin River 6 times and have 14 other crossings of perennial streams (8 crossings on NFS lands and 6 crossings on private land), and 10 crossings of intermittent streams (7 crossings on NFS lands and 3 crossings on private land). Table 3.4.4-3 (page 3-162) and Figure 3.4.4-2 (page 3-151) shows the number of water course crossings for each alternative, while Table 3.4.4-4 (pages 3-162) shows the acreage of highly erodible soils within 300 feet of a drainage for the alternatives (on NFS lands only).

We are pleased that all waterbodies and associated floodplains and riparian vegetation would be spanned by the transmission line (page 3-158), and an NPDES (MPDES) permit would be obtained, which includes development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) prescribing engineering practices and BMPs to minimize sediment production and transport to streams (page 3-156). We are also pleased that the DEIS identifies project design features and mitigation and monitoring activities to protect water quality in Chapter 2 and Appendices C and D, and states that there would be no long term, negligible impact to water quality from the action alternatives (pages 3-158 to 3-160).

10. The EPA considers the protection, improvement, and restoration of riparian areas and wetlands to be a high priority. Wetlands and riparian areas increase landscape and species diversity, support many species of western wildlife, and are often critical to the protection of water quality and designated beneficial water uses. Potential impacts on riparian areas and wetlands include: water quality, habitat for aquatic and terrestrial life, flood storage, ground water recharge and discharge, sources of primary production, and recreation and aesthetics.

Executive Order 11990 requires that Federal Agencies *"take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out the agency's responsibilities..."* and agencies are further directed to *"avoid undertaking or providing assistance for new construction located in wetlands unless the head of the agency finds (1) that there is no practicable alternative to such construction, and (2) that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use..."*. In addition national wetlands policy has established an interim goal of **No Overall Net Loss of the Nation's remaining wetlands**, and a long-term goal of increasing quantity and quality of the Nation's wetlands resource base.

We appreciate the GNF's efforts to evaluate wetland resources in the project area (field review and evaluation of Montana Natural Heritage Program (MTNHP) wetland data). The DEIS states that 10 wetlands, one ephemeral drainage, and 14 streams were identified, and that 6 of the wetlands found had not been previously identified and were added to the GIS water resource database (page 3-164). Table 3.4.4-5 shows the acres of MTNHP and field identified wetlands in the transmission line ROW for the alternatives (page 3-166), and Figure 3.4.4-2 shows the water and wetlands in the analysis area as well as MTNHP and field identified wetlands in the ROW (page 3-151).

We are pleased that the preferred alternative involves the fewest crossings of wetland areas (2.1 acres), and that riverine wetlands would be spanned in conjunction with spanning of the Gallatin River, and all other wetlands would be spanned "to the extent practicable" (page 3-166). The DEIS indicates that some vegetation may need cutting or trimming for the larger 50-foot ROW to allow for required clearance for conductors, but the minimum amount of vegetation would be cut to reduce disturbance to wetland functions and values.

We recommend that placement of transmission line support structures be prohibited in wetlands, and that a wetland buffer zone be used to avoid inadvertent construction impacts to wetlands (e.g., 50 foot wetland buffer zone). We also recommend that wetlands be flagged on the ground to facilitate contractor avoidance of wetlands and inadvertent wetland impacts.

11. While the DEIS states that it is not expected that specific wetland fill or dredge permits would be required (page 3-166), and there would be no impact to wetlands for any of the alternatives from staging areas, fly yards, or deck areas (page 3-169), it also states that the U.S. Army Corps of Engineers (USACE) would be consulted to confirm jurisdictional status and wetland impacts avoidance (to the extent practicable). It further states that if wetland impacts cannot be avoided, the jurisdictional wetland delineations would be used to determine the need for a permit, and that temporary wetland matting would be used if wetlands need to be crossed by equipment to reduce impacts to vegetation, hydrology, and soils (page 3-169).

We are pleased that the DEIS states that NorthWestern would comply with requirements of the CWA and other regulations and obtain and/or complete applicable permits and plans (page 3-165). and that additional jurisdictional wetland delineations would be conducted as needed for the affected wetland(s) to support permitting requirements (page 3-164). We encourage the GNF to contact Mr. Todd Tillinger of the U.S. Army Corps of Engineers, Montana Office in Helena at 406-441-1375 to determine applicability of 404 permit requirements to proposed construction activities

in or near streams or wetlands. The 404(b)(1) Guidelines (found at 40 CFR Part 230) provide the environmental criteria by which 404 permits are evaluated. See Corps of Engineers Montana Regulatory Office website for further information, <http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/Montana.aspx>.

We also encourage contact with Mr. Jeff Ryan of the Montana DEQ at 406-444-4626 in regard to MDEQ permits and authorizations. A Montana Stream Permitting Guide is available to explain the various permitting authorities <http://dnrc.mt.gov/permits/streampermitting/guide.asp>. For your information to ease the administrative burden the Federal and State agencies have developed a single permit application for the various potential permits or authorizations that are often needed for construction near streams and wetlands (<http://dnrc.mt.gov/permits/default.asp> , http://dnrc.mt.gov/permits/streampermitting/joint_application.asp).

Soils

12. Transmission line construction on steep terrain and removal of vegetation during construction creates concerns regarding soil erosion. The DEIS indicates that the GNF Soil Survey does not provide sufficient detail or accuracy for management decisions at a project scale, although it provides some understanding of the general distribution of soils in the area (page 3-173). It states that there is potential for detrimental compaction due to loam and silt loam surface textures, and high potential for rutting in soils along the Gallatin River and some wet areas (page 3-188). The two soil units with the greatest potential for mass wasting are stated to be Unit 6E where underlying shale bedrock can cause landslide activity on steep slopes, and unit 9G where steep to extremely steep slopes are also prone to rockslides as evidenced by large scree slopes in the area.

Table 3.4.5-7 (page 3-189) shows acreages of soil disturbance for the alternatives which evidences little variation in soil impacts among alternatives. All action alternatives would cause the same level of permanent soil disturbance (0.34 acre), with only slight variations in the amount of temporary disturbance caused. Alternative 2 would have the fewest acres of timber cleared (14.8 acres), while Alternative 4 would have the most acres of timber cleared (22.5 acres), closely followed by Alternative 3 (22.4 acres).

We are pleased that the DEIS states that disturbed areas (with the exception of existing access roads) would be restored to their original contour and reseeded with Forest Service approved native seed mixtures where appropriate, and ripping and other surface scarification on existing construction roads or other areas would be done as needed (page 2-30). We expect that these measures along with other project design features, BMPs and reclamation activities and the COM Plan and inspection during construction would minimize soil impacts.

Noxious Weeds

13. As you know construction activities that involve soil disturbance create conditions favoring the spread of noxious weeds. We support use of noxious weed mitigation and control methods during transmission line construction, since many noxious weeds can out-compete native plants and produce a monoculture that has little or no plant species diversity or benefit to wildlife. We are

pleased that a Draft Weed Management, Reclamation, and Revegetation Plan is included in Appendix C to limit and control weeds along the transmission line ROW, and that noxious weed effects are discussed in Chapter 3 of the DEIS (pages 3-193 to 3-211).

Weed prevention is the most cost-effective way to manage and control weeds by avoiding new infestations and spread of weeds, and thus, avoiding the need for subsequent weed treatments (e.g., weed prevention practices such as minimizing ground disturbance, revegetating disturbed areas, use of weed free seed, cleaning vehicles and equipment, and other practices that prevent infestation and spread of weeds). Early recognition and control of new weed infestations avoids wider future use of herbicides and other control methods. We also recommend use of gates on access roads to discourage ATV/recreational vehicle travel on roads, since such motorized uses add to soil disturbances and disperse weed seeds (although there will be only one 600 foot new temporary access road on NFS lands, but there are other existing roads that would be used).

We appreciate the identification of mitigation measures regarding herbicide use in the Draft Weed Management, Reclamation, and Revegetation Plan (Table 1, Appendix C). Herbicide drift into streams and wetlands can adversely affect aquatic life and wetland functions such as food chain support and habitat for wetland species. It is important that only certified herbicide applicators be used and that herbicides be used in accordance with label specifications. It should be unequivocally stated that no herbicide spraying will occur in streams and wetlands or other aquatic areas (seeps, springs, etc.). We recommend use of 50 foot no spray buffer zones along streams and wetlands for chemicals toxic to aquatic life (e.g., tordon/picloram), and mechanical weed removal or hand-pulling of weeds adjacent to aquatic areas. Hand-pulling can be effective for weeds that do not contain extensive root systems near surface waters. It may be helpful to add a list of those weed species which can be effectively hand-pulled (i.e. those without large tap roots and spreading rhizomatous root systems). The herbicide application technique of hand or manual wipe-on (especially applicable for contact systemic herbicides such as glyphosate) is an option to control individual weed plants up to the existing water level adjacent to streams or sensitive aquatic sites.

All efforts should be made to avoid movement or transport of herbicides into surface waters that could adversely affect public health, fisheries or other water uses. The Montana Water Quality Standards include a general narrative standard requiring surface waters to *be free from substances that create concentrations which are toxic or harmful to aquatic life*. Herbicide applicators should be advised of the potential for runoff of herbicides at toxic concentrations into the streams. The applicators should take precautions during spraying (e.g., applying herbicide only after careful review of weather reports to ensure minimal likelihood of rainfall within 24 hours of spraying; special precautions adjacent to the stream to reduce runoff potential; etc.). Streams and wetlands in any area to be sprayed be identified and flagged on the ground to assure that herbicide applicators are aware of the location of wetlands, and thus, can avoid spraying in or near wetlands. We are particularly concerned about potential use of more toxic and persistent herbicides such as picloram (Tordon), since they have higher potential for more serious stream and/or groundwater contamination. We recommend that roadside drainage areas leading to intermittent and perennial streams be flagged as no-spray zones and not sprayed with picloram based herbicides.

We also recommend that herbicides be applied at the lowest rate effective in meeting weed control objectives and according to guidelines for protecting public health and the environment. We recommend that picloram not be used at rates greater than 0.25 lbs/acre, and suggest that applications of persistent herbicides such as picloram only occur once per year to reduce potential for accumulation in soil. Potential for persistent herbicides to accumulate in soil in harmful amounts are reduced if sites are treated only once per year (twice being the limit). Trade-offs between effective weed control and effects on soil productivity and leaching concerns may need to be considered. A second treatment application if needed should only occur after 30 days (or according to label directions).

We also recommend that herbicide weed treatments be coordinated with the Forest botanist to assure protection to sensitive plants, and coordinated with fisheries biologists and wildlife biologists to assure that sensitive fisheries and wildlife habitat areas are protected. Please also note that there may be additional pesticide use limitations that set forth geographically specific requirements for the protection of endangered or threatened species and their designated critical habitat. This information can be found at <http://www.epa.gov/espp/bulletins.htm>. You may also want to consider use of a more selective herbicide (clopyralid) in conifer associated communities to reduce impacts on non-target vegetation. We also note that spotted knapweed, which is a prevalent noxious weed species in Montana, is non-rhizomatous and should be relatively easy to control with lower rates of the more selective low toxicity herbicides.

For your information, the website for EPA information regarding pesticides and herbicides is <http://www.epa.gov/pesticides/>. The National Pesticide Telecommunication Network (NPTN) website at <http://nptn.orst.edu/tech.htm> which operates under a cooperative agreement with EPA and Oregon State University and has a wealth of information on toxicity, mobility, environmental fate on pesticides that may be helpful (phone number 800-858-7378).

Electromagnetic Fields

14. As you know there can be public health concerns regarding electric fields created by a high-voltage transmission lines. Electromagnetic fields (EMF) effects can include induced currents, steady-state current shocks, spark discharge shocks, and in some cases field perception and neurobehavioral responses. We appreciate the analysis and discussion regarding potential human health and safety considerations in regard to the proposed project (pages 3-347 to 3-351). We are pleased that the DEIS analysis states that the proposed transmission lines would be constructed in accordance with industry and NorthWestern standards to minimize hazardous shocks from direct or indirect human contact with an overhead, energized line, and is expected to pose minimal hazards to humans (page 3-348).

The DEIS further states that the project would meet Montana Major Facility Siting Act requirements for minimal electric fields (i.e., an electric field at the edge of the ROW must not to exceed 1.0 kV/m measured one meter above the ground in residential or subdivided areas unless the affected landowner waives this condition; and the electric field at road crossings under the facility not exceed 7.0 kV/m measured at one meter above the ground [ARM 17.20.1607 "Linear Facilities, Minimum Impact Standard"]).

Air Quality

15. The DEIS indicates that Forest-Wide Standard 9 – Air Quality requires that the GNF cooperate with the Montana Air Quality Bureau and meet requirements in the State Implementation Plan and Montana Smoke Management Plan (page 3-226). However the DEIS did not include much analysis and discussion of potential air quality effects associated with transmission line construction and operation. It is likely that transmission line construction would include activities that could affect air quality during construction (short term), and during operation and maintenance of the transmission line (longer term). While we would not expect major air quality effects from construction and operation of a 37 mile transmission line, there may be potential for some air quality impacts from use of equipment and vehicles during construction, operation and maintenance (i.e., pollutant emissions of carbon monoxide, carbon dioxide, sulfur oxides, PM-2.5, nitrogen oxides, volatile organic hydrocarbons, aldehydes, and polycyclic aromatic hydrocarbons), and creation of fugitive dust and particulates during construction.

We recommend that potential air quality impacts be discussed more fully in the FEIS. We also recommend that the FEIS include public disclosure that there are no air quality non-attainment areas located near the proposed transmission line alignments (<http://deq.mt.gov/AirQuality/Planning/AirNonattainment.mcp>). In addition the FEIS should identify any nearby Federal/State air quality Class I areas located within 100 miles of the project area (i.e., Yellowstone National Park). It would also be of interest to discuss meteorological conditions in the project area that may result in dispersion of construction related air pollutants.

Fugitive dust during construction should be controlled with dust control measures such as water sprays, limiting the speed of construction equipment, and reseeded the disturbed areas at the end of the construction period, and gaseous emissions limited through construction management and scheduling. We often recommend limiting diesel emissions by reduced idling and modern diesel engines and/or use of Ultra Low Sulfur Diesel in the construction equipment, and including rock crushing and other material production and processing that may be needed during construction of access roads in the efforts to minimize fugitive dust. For your information, we have identified below some mitigation measures to reduce air quality impacts during construction.

- Requiring heavy construction equipment to use the cleanest available engines or to be retrofitted with diesel particulate control.
- Requiring diesel retrofit of construction vehicle engines and equipment as appropriate.
- Using alternatives for diesel engines and/or diesel fuels such as: biodiesel, LNG or CNG, fuel cells, and electric engines.
- Installing engine pre-heater devices to eliminate unnecessary idling during winter time construction.
- Prohibiting the tampering of equipment to increase horsepower or to defeat emission

control device's effectiveness.

- Requiring construction vehicle engines to be properly tuned and maintained.
- Using construction vehicles and equipment with the minimum practical engine size for the intended job.
- Using water or wetting agent to control dust.
- Using wind barriers and wind screens to prevent spreading of dust from the site.
- Having a wheel wash station and/or crushed stone apron at egress/ingress areas to prevent dirt being tracked onto public streets.
- Covering, as appropriate, all dump/haul trucks leaving sites.
- Covering or wetting temporary excavated materials.
- Using a binding agent for long-term excavated materials.
- Locating diesel engines as far away as possible from residential areas.
- Locating staging areas as far away as possible from residential uses.

Avian Mortality

16. The proposed transmission line will be located in a riverine area frequented by many bird species, and as you know transmission lines can result in avian mortality particularly due to bird collisions with the transmission line. We are pleased that the DEIS indicates that the transmission line would be constructed in accordance with the Avian Power Line Interaction Committee's (APLIC) guidelines (APLIC 2006) for avian safety and operated under an Avian Protection Plan to reduce risk of collision and electrocution (page 298). It also states that the increased diameter of the new 161 kV conductor under the action alternatives may result in increased visibility of the line, thus potentially allowing avian species more time to maneuver and avoid collision (pages 3-295).

We did not see mention of any monitoring or surveys of potential bird mortality that may occur as a result of bird collisions with transmission line to identify and detect bird mortality issues that may occur. Is any avian mortality monitoring along the transmission line route proposed? We recommend that the field surveys be conducted during the spring and fall migratory periods and the spring nesting period to locate birds which may have been electrocuted or have struck transmission lines to aid in the process of identifying and modifying problem areas. Such monitoring can help ensure that the transmission line is visible enough to avoid bird collisions and avian mortality during long-term operation.

Other Wildlife Impacts

17. The DEIS indicates that transmission line construction, operation, and maintenance activities could impact wildlife species and their habitat, including the threatened Canada Lynx and Grizzly Bear. Table 3.4.9-3 (page 3-251) shows wildlife species potentially impacted by the proposed project. Potential wildlife impacts may include habitat loss; noise disturbance associated with human presence and construction equipment; and increased mortality (page 3-257).

The DEIS states that Alternative 2 would impact the least amount of forest habitat (14.8 acres) and shrubland habitat (3.9 acres) that may provide cover, foraging, and linkage habitat for grizzly bears, with Alternative 3 impacting 22.4 acres of forested and 4.3 acres of shrubland habitat, and Alternative 4 impacting 22.5 acres of forested and 4.2 acres of shrubland habitat (page 3-268). The DEIS also states that action alternatives would meet all applicable direction for the threatened Canada Lynx. ROW expansion would affect minor amounts of boreal forest and lynx critical habitat (≤ 2.2 acres and ≤ 20.1 acres respectively). There would be no impacts to existing lynx foraging or denning habitat, and indirect impacts to potential future denning/foraging habitat would be ≤ 2.2 acres. Project associated activities would be concentrated in the most highly developed area of affected LAUs. The proposed action would occur along the edge of two adjacent LAUs, so would not impact lynx habitat or connectivity within LAUs (page 3-283). Project design features and mitigation measures to reduce wildlife effects are included in Chapter 2 and BMPs in Appendix D.

Section 7 Endangered Species Act (ESA) consultation with the US Fish and Wildlife Service (USFWS) appears to be ongoing (page 2-36). The DEIS states that mitigation measures developed during this consultation for impacts to threatened and endangered (T&E) species would be adhered to, and that preconstruction surveys for species protected under the Endangered Species Act would be conducted by qualified biologists to determine presence, absence, and habitat occupancy.

We are pleased that the Forest Service is in ESA Section 7 consultation with the USFWS. We advise preparation of a Biological Assessment for the threatened Grizzly Bear and Canada Lynx, and submittal to the USFWS before a decision is made. We note that if it is found that the finally selected project alternative may adversely affect any T&E species the final EIS should include the associated USFWS Biological Opinion or formal concurrence for the following reasons:

- (a) NEPA requires public involvement and full disclosure of all issues upon which a decision is to be made;
- (b) The CEQ Regulations for Implementing the Procedural Provisions of NEPA strongly encourage the integration of NEPA requirements with other environmental review and consultation requirements so that all such procedures run concurrently rather than consecutively (40 CFR 1500.2(c) and 1502.25); and
- (c) The Endangered Species Act (ESA) consultation process can result in the identification of reasonable and prudent alternatives to preclude jeopardy, and mandated reasonable and prudent measures to reduce incidental take. These can affect project implementation.

Since the Biological Assessments and EIS must evaluate the potential impacts on listed species, they can jointly assist in analyzing the effectiveness of alternatives and mitigation measures. The EPA recommends that the final EIS and Record of Decision not be completed prior to the completion of ESA consultation. If the consultation process is treated as a separate process, the Agencies risk USFWS identification of additional significant impacts, new mitigation measures, or changes to the preferred alternative.

Historic and Archaeological Resources

18. The ROW for the proposed project for all action alternatives crosses several historic sites, including two recreation residences eligible for the National Register (page 3-84). Four known archaeological sites, assumed to be eligible to the National Register fall within the ROW and could also be impacted by ground-disturbing activities (page 3-85). The DEIS states that only nine percent of the study corridor has been surveyed for cultural resources, so it is possible that undiscovered historic or archaeological sites exist in the project area that could also be affected.

We are pleased that Section 106 of the National Historic Preservation Act (NHPA) will be followed to address identification, evaluation, assessment of cultural effects, and implementation of measures to eliminate or reduce adverse effects (page 3-83), and that a Memorandum of Agreement (MOA) or Programmatic Agreement (PA) will be drafted between the Forest Service, Montana SHPO and other parties to address historic and archaeological effects of the transmission line. This MOA or PA will identify specific project design features that will be implemented to mitigate identified adverse impacts, how sites will be recorded, if archaeological monitoring is necessary, and how eligibility will be determined for archaeological sites and isolated finds and for historic buildings and structures

We are also pleased that government-to-government Tribal consultation has been initiated by the GNF to identify issues of concern to Native Americans regarding the proposed project, including contacting the Confederated Salish and Kootenai Tribal Historic Preservation Office (THPO), Eastern Shoshone Tribe THPO, Crow Tribal Council, Crow Cultural Committee, Nez Perce Tribe, Shoshone-Bannock Business Council, and Wind River Shoshone Cultural Committee (page 3-54). We expect that potential impacts on Tribal cultural properties, if any, will be identified and addressed during government-to-government consultation between the GNF and interested Tribes.

Environmental Justice

19. Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," requires federal agencies to make environmental justice part of their missions by identifying and addressing, as appropriate, disproportionately high and adverse human health and environmental effects of its programs, policies, and activities on minority populations (e.g. Native American) and low-income populations. We did not see discussion or disclosure in the DEIS regarding the potential for disproportionate adverse impacts to minority or low-income populations from construction and operation of the proposed transmission line.

While we would not anticipate disproportionate adverse impacts to environmental justice populations, we recommend that the FEIS include some evaluation and disclosure regarding

environmental justice considerations and compliance with E.O. 12898 (see CEQ guidance at, <http://ceq.hss.doe.gov/nepa/regs/ej/justice.pdf> & EPA guidance at, http://www.epa.gov/compliance/resources/policies/nepa/enviro_justice_309review.pdf).

Roadless Areas

20. Roadless areas often provide population strongholds and key refugia for listed or proposed species and narrow endemic populations due to their more natural undisturbed character. EPA supports protection of the pristine character and integrity of remaining minimally disturbed roadless areas to prevent further fragmentation and degradation of wildlife habitat, and to maintain or restore solitude and primitive recreation characteristics in such areas.

The DEIS indicates that the current 69 kV transmission line ROW and the proposed alternative ROWs pass through four segments of the Madison Inventoried Roadless Area (IRA), and the Gallatin Fringe IRA is within approximately 0.25 mile of the project, and there are a few areas of unroaded lands lay between the existing transmission line and the Madison IRA (page 3-131). Table 3.4.3-1 (page 3-137) shows transmission line ROW within roadless areas, with all action alternatives having identical effects, increasing ROW within the Madison IRA by 1.8 acres, due to the increase in ROW width by approximately 10 feet. The Gallatin Fringe IRA is not impacted by any alternative.

We are pleased that the DEIS concludes that the action alternatives would have minimum additional impacts on roadless areas, and would not significantly further diminish the roadless character of the Madison IRA. The DEIS indicates that the existing US Hwy 191 and MT Hwy 64 and other human developments within or adjacent to this IRA have already diminished the roadless character of the area (page 3-140), and that most of this human development existed prior to the boundary of the Madison IRA being established.

U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements

Definitions and Follow-Up Action*

Environmental Impact of the Action

LO - - Lack of Objections: The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC - - Environmental Concerns: The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO - - Environmental Objections: The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU - - Environmentally Unsatisfactory: The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 - - Adequate: EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 - - Insufficient Information: The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 - - Inadequate: EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

